COUNTY OF LOS ANGELES
DEPARTMENT OF AUDITOR-CONTROLLER

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September 06, 2001

TO: Supervisor Michael D. Antonovich, Mayor
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Supervisor Yvonne Brathwaite Burke
Supervisor Zev Yaroslavsky
Supervisor Don Knabe

FROM: J. Tyler McCauley
Auditor-Controller

SUBJECT: **County Toll-Free Numbers Review**

On May 15, 2001, the Board directed the Auditor-Controller to review toll-free numbers for County services or information, evaluate their effectiveness and report on how to make the County's toll-free numbers more customer oriented and user friendly. The findings from our review are presented in this report.

Summary of Findings

Toll-free telecommunications systems are an important part of the County's strategic plan Service Excellence goal to provide the public with easy access to quality information and services that are both beneficial and responsive. Our review disclosed that although departments are attempting to utilize toll-free numbers and call processing systems to enhance customer service, departments need to make their systems more customer oriented and user friendly. Some of the changes recommended in this report will assist the public in using the systems and gaining access to desired information thereby increasing their satisfaction as well as department productivity. Other recommended changes will help reduce customer frustration and dissatisfaction with long wait times.

Following is a brief summary of key findings. A more detailed discussion of these findings and recommendations for improvement may be found in the body of the report.

- Departments need to improve the operation of their call processing systems by conducting at least quarterly comprehensive system reviews to ensure their systems are operating as intended. "Scripting" errors (message narration),

programming glitches such as "looping," "dead-ends," conflicting options, and incorrect call routing options frustrate customers and reinforce negative perceptions of government services. Regular system reviews will identify these errors so they can be quickly corrected.

- A number of existing call processing systems need to incorporate advanced system features by upgrading to more sophisticated hardware and software technology. Existing system and hardware problems are often the result of outdated equipment, hardware limitations, and poor system design. For example, departments need to incorporate automated interactive equipment to free operators for more complex calls, increase system accessibility hours and improve customer system usability and satisfaction. Queuing messages and music features should also be added when possible to let callers know where they are in the queue and that they are still connected.

- The County needs to adopt a Countywide Telecommunications Strategy. Currently, departments use a large variety of call processing systems with a wide range of sophistication. The County should move toward a centralized telecommunications strategy that will provide improved oversight of all call processing systems. The benefits will be standardization and coordination in system acquisitions and uniform operational policies and practices. This should result in improved system interface capabilities, reduced duplications of efforts, facilitated improvement and maintenance, and cost savings through countywide purchasing agreements.

Approach

Our approach was to review a sample of County toll-free numbers and several non toll-free menu driven numbers in response to complaints made to the Board of Supervisors. We obtained these numbers from lists provided to us by the Internal Services Department (ISD), County Web pages and County government listings in the telephone directory white pages. The ISD list detailed approximately 250 toll-free numbers. A categorized list of numbers that we called is included in Attachment A. Our sample consisted of 85 public access, 12 internal-use and 17 miscellaneous numbers. Included in our sample were 22 menu driven numbers. We called these numbers to test the system, and identify and document operational problems. We also interviewed telecommunications analysts and engineers and other departmental representatives. In addition, we interviewed vendors that manufacture, distribute and service a variety of telecommunications equipment. The final part of our review consisted of comparing certain County operations with those of other entities. Attachment B contains definitions of call-processing system terms.

Commonly Encountered Problems

Scripting Errors

"Scripting" (message narration) and programming errors (menus and options) represent the majority of problems we encountered. Scripting problems frequently occur in conjunction with programming errors. Poor scripting may confuse or frustrate callers with conflicting information, too much information or no initial choice of preferred language, etc. Examples of scripting errors include:

- Too many menu choices that overwhelm the callers in terms of numbers and time involvement. We listened to one department's menu and were presented with 39 major category choices and a number of options within each category. Although the department provides a written menu for its known clients, a new caller to the system would have to invest a considerable amount of time listening to each and every option to locate the desired information, if it is even available.

- Several departments furnish the callers with mandatory information that may not be valuable to the caller. For example, one department's greeting included address, office hours, telephone number, street directions from adjacent freeways, etc. This information is appropriate as an additional option, but is not necessarily needed by each person who calls.

- Another department's recording prompts the callers to select the change of address option for reporting address changes. However, no change of address option is provided from this particular menu section. The option is eventually available after the caller selects another menu section, although it is not initially evident to the caller.

- One department's recording went through a listing of menu choices in both English and Spanish without providing callers the option of listening to the information in one preferred language. Another department provided a language choice, but the choices were offered in English, assuming the listener understood English. Language choices should be offered at the beginning of a recording before providing any additional information. This includes providing the language choice in the specific languages of the choices being offered.

Scripting problems are easily correctible by re-recording or editing the message.

Programming Errors

Programming errors typically consist of "looping", "dead-ends," and conflicting options, etc. Looping occurs when a caller is inappropriately returned to the point of origin. A dead-end refers to a pathway that ends without giving the caller a way out. Conflicting options are those that are logically contrary.

These types of programming errors frequently are caused by poorly formatted directory "trees." Directory trees are similar to a flowchart and depict the movement of telephone calls from one option to another within the system. Programming errors are frequently present in conjunction with scripting problems. The following are examples of looping, dead-ends, and conflicting options that we encountered during our review.

- One department connected us to an automated telephone system. Each time we selected an option, we were transferred back, or looped, to our original starting point.

- We reached a dead-end when another system prompted us to input a location code that would normally be furnished on paperwork sent to the caller. Since we did not have paperwork with a location code, we randomly entered "12." The system responded by informing us, "Sorry you are having trouble. Please try your call again." We then received a busy signal. The caller should have an opportunity to reenter the correct location code.

- We encountered a conflicting option in a system that requires an exclusive Personal Identification Number (PIN) to access the system. When a caller attempts to access the automated system, the caller is provided with two options. The caller is prompted to select the first option to enter a PIN, or select the second option if the PIN is unavailable. If the caller selects the second option, the caller is notified that a PIN must be entered. Because the second option conflicts with the first option, the second option should either be eliminated and the caller informed that a PIN is required to access the automated system, or the caller should be told how to obtain an existing or new PIN.

Programming errors can be corrected by identifying and eliminating loops, dead-ends and conflicting options in the directory trees.

System or Hardware Problems

System or hardware problems may result from inadequate or outdated equipment capabilities, hardware limitations, poor system design, and poor review of existing system requirements, programming demands, etc. These problems are magnified when departments experience a heavy call volume, such as during peak periods of election and voter registration activity. The following are a few examples of system and hardware problems we noted during our review.

- We tested an older Interactive Voice Response (IVR) and Automatic Call Distributor (ACD) system (See Attachment B). The system has five incoming toll-free lines and approximately 18-20 local lines. When the department experiences a heavy call volume, accessing the system from the toll-free number is difficult. This difficulty results from the limited number of incoming toll-free lines. Since most callers utilize the toll-free line, regardless of their calling area, one suggested solution is to increase the number of toll-free lines and reduce the

local lines by a corresponding number, which would allow more callers to access the system without extensive modification to the existing equipment.

- We also noted problems at one department that uses Pacific Bell's (PacBell) Central Office Based Call Routing System (CRS). This system, which uses only live operators, restricts accessibility when all the queue slots are filled with callers or when only one call has been held in queue for 30 minutes. Both situations result in new callers hearing a busy signal, which prevents them from entering the queue. We reviewed a tracking report that was furnished to us for this system and identified the longest holding time during the period to be 59 minutes.

  This problem cannot be corrected with a hardware solution to the CRS because the switch equipment utilized by PacBell establishes the queue limitations or parameters. The department plans to upgrade the system with an IVR to automate specific responses to callers. This upgrade should reduce the number of calls the operators need to handle, and relieve the queue limitations inherent in the CRS switch equipment.

- When we called the toll-free number at another department that also uses PacBell's Central Office Based Call Routing System, we were prompted to input our area code and prefix. When we entered "562" and "940" respectively, the system informed us it did not recognize the area code or prefix. After investigation, we determined the routing table had not been updated to reflect the change from the "310" area code to the "562" area code. Routing tables were described to us as information that directs toll-free number callers to the least expensive calling route. Departments using PacBell's Central Office Based Call Routing Systems should ensure their call routing tables have been updated.

Commonly Encountered Problems Summary

System or hardware problems require a thorough system analysis to determine weaknesses, problems and feasible solutions. Departments should be required to implement comprehensive system reviews, at least quarterly, to locate and correct all scripting errors. In addition, the departments should, with qualified assistance, examine and reevaluate their systems' directory trees to locate and eliminate looping, dead-ends and conflicting options. Departments should also thoroughly analyze their current systems, at least quarterly, and assess available options to improve accessibility and customer satisfaction, which includes ensuring their call routing tables have been updated.

Recommendations

The Board of Supervisors direct all department heads to:

1. **Implement comprehensive system reviews, at least quarterly, to locate and correct all scripting errors.**

Recommendations (continued)

2. **Examine and reevaluate their systems' directory trees to locate and eliminate looping, dead-ends and conflicting options.**

3. **Thoroughly analyze their current systems, at least quarterly, and assess available options to improve accessibility and customer satisfaction, which includes ensuring their call routing tables have been updated.**

Innovative Technology

We conducted research to determine what systems are available to help improve the County's toll-free telecommunications systems, which included comparing County operations with similar operations in other agencies. The following are available features that should be considered for implementation.

Call-Tracking Reports

Several departments already possess the ability to generate or procure call-routing reports. These reports contain timely and useful information that detail call routing, peak calling times, number and type of caller disconnect, etc. The reports contain information that is helpful in identifying problem areas, and should be reviewed by high-level department managers to ensure timely response to problem areas. However, we noted many departments do not have call routing reports available and several departments that have the ability to generate these reports, do not.

Survey Questionnaire

We determined it would be useful for departments to develop and implement a comprehensive IVR survey questionnaire to obtain user feedback about their systems. A questionnaire would provide valuable input on the operations of the system and could be designed to target specific problems, complaints and improvements the users may suggest.

Queuing Messages and Music

While reviewing call-processing systems, we noted that many of them did not have important feedback features. These features include background music for callers waiting in queue to let them know they are still connected, notifying callers of their position in queue, and the approximate wait time. Most call processing systems possess the capabilities to include messages and/or music features.

Automated Interactive Equipment

The County's Interdepartmental Telephone System uses live operators to provide property tax information and is shared by the Treasurer and Tax Collector, Assessor, Assessment Appeals Board and the Auditor-Controller. We compared and contrasted the system with the San Bernardino County Tax Collector's (SBC) and Orange County Treasurer-Tax Collector's (OC) systems.

SBC's Information Systems (IS) Manager indicated they utilize an ACD, IVR and Internet website to provide efficient and enhanced customer service capabilities to its Countywide community. SBC receives approximately 6,000-10,000 calls per day depending on seasonal peak calling times. SBC designed and proactively manages the system so that callers who require personalized service do not experience more than a 10-15 minute waiting period during peak times. In addition, users can retrieve routine personalized tax information by accessing the automated IVR system or Internet website 24-hours per day, which has reduced the number of telephone calls from customers seeking information from live operators. OC uses similar interactive equipment, but has not implemented an Internet website.

The County's Interdepartmental System currently lacks an automated means to interact with callers. However, the Departments are moving toward Phase II completion of their telecommunications upgrade, which includes incorporating an automated IVR system and interactive Internet website. This system should be operational by November 2001. The addition of interactive equipment will free live operators for more complex calls, increase hours of accessibility and improve customer usability and satisfaction. Incorporating automated interactive equipment in systems to handle routine calls will reduce the need for live operators since more users will obtain, for themselves, automated responses to routine questions either by calling an IVR system or using an Internet website.

Innovative Technology Summary

To improve the County's toll-free telecommunications systems, departments should generate and require high-level management review of call-tracking reports to identify problem areas for timely corrective action. In addition, departments currently using IVRs should develop and implement a comprehensive IVR survey questionnaire designed to identify problems and caller complaints when using County call-processing systems. These surveys can be conducted using existing County IVRs. Callers could be encouraged to participate and would be directed to the survey with the addition of one extra menu option.

Departments should also include queuing messages and/or music features with their call-processing systems, where feasible. In addition, departments should incorporate automated interactive equipment in their systems to handle routine calls, which include IVRs and Web-based services.

Recommendations

The Board of Supervisors require department heads to:

4. **Generate and require high-level management review of call-tracking reports to identify problem areas for timely corrective action.**

5. **Develop and implement a comprehensive IVR survey questionnaire designed to identify specific problems and caller complaints when using County call-processing systems.**

6. **Include queuing messages and/or music features with their call-processing systems, where feasible.**

7. **Incorporate automated interactive equipment in their systems to handle routine calls, which includes IVRs and Web-based services.**

Countywide Telecommunications Strategy

Standardizing Replacement Systems and Upgrades

As systems are replaced and upgraded through attrition, it would be beneficial to select replacement systems based on scalability and compatibility. Scalability refers to using the same manufacturer with a range of telecommunications products that allow the department to upgrade without major system modifications. Compatibility refers to the ability to interface with other similar systems. The benefits could include significant savings in purchasing costs, maintenance, and repairs, and avoid significant reliance on outside vendors.

Coordination of Future Acquisitions and Upgrades with ISD

Currently, each department is acquiring and maintaining its own systems without coordination or consideration of possible County requirements as a whole. During our review, the various departments and systems currently in use were discussed with ISD telecommunications personnel. We determined that ISD personnel are well-versed in particular systems, and provide an important point of contact for department personnel seeking assistance in system selection, bidding, ordering, installation, and troubleshooting.

Integration of Telephony and Web-based Services

The cities of Los Angeles and Diamond Bar are attempting to increase customer satisfaction and reduce costs by introducing the use of a “one” number system that allows a user to dial just one telephone number to access various city departments and information messages. The “one” number provides a menu that allows the caller to transfer to the requested department or information.

We spoke to representatives from the cities of Los Angeles and Diamond Bar regarding their efforts to move to a "one" number system. We also spoke to the vendor supplying the system. The County implementation of a "one" number system integrated with the Internet should be considered. The advantages include:

- One telephone number for users to remember.
- Probable reduction of telephone calls and accompanying County telephone costs as more users obtain automated responses to routine questions for themselves by accessing the Internet.
- Fewer live operators resulting in lower costs.
- 24 hours, seven days per week user access to information.

An evaluation of this program could be done in conjunction with the establishment of a Countywide Telecommunications Strategy as discussed below.

Countywide Telecommunications Strategy Summary

According to the Chief Information Office, there is no Countywide Telecommunications Strategy in place. Based on our review and analysis, the County should eventually move toward a simplified and centralized telecommunications strategy where departments acquire systems that possess the capability to interface with one another and with other platforms as part of a future-oriented telecommunications strategy. This includes standardizing replacement systems and upgrades, where feasible, to meet and accommodate future demands. Standardization would reduce duplication of efforts and should facilitate improvements and maintenance. In addition, there would likely be cost savings through Countywide purchasing agreements for call-processing systems.

The Board of Supervisors should direct the Chief Administrative Office to establish a task force comprised of the Chief Information Office, the Internal Services Department and other affected departments to study the feasibility of implementing a Countywide Telecommunications Strategy. This Telecommunications Strategy should incorporate standardization for acquiring new systems and upgrades through ISD, and include the topics mentioned previously in the Innovative Technology and the Commonly Encountered Problems sections of this report.

In addition, the Board of Supervisors should direct the task force to investigate and report its recommendations for implementing a "one" number system integrated with the Internet.

Recommendations

8. **The Board of Supervisors direct the Chief Administrative Office to establish a task force comprised of the Chief Information Office, the Internal Services Department and other affected departments to study the feasibility of implementing a Countywide Telecommunications Strategy.**

9. **The Board of Supervisors direct the task force to ensure that the Telecommunications Strategy incorporates standardization for acquiring new systems and upgrades through ISD and include the topics mentioned previously in the Innovative Technology and the Commonly Encountered Problems sections of this report.**

10. **The Board of Supervisors direct the task force to investigate and report its recommendations for implementing a "one" number system integrated with the Internet.**

During our review, we provided feedback to the departments about the problems we encountered. We would like to thank the departments that participated in this review for their cooperation. If you have any questions or comments, please contact me or have your staff contact DeWitt Roberts at (213) 974-0301.

JTM:DR:IDC

Attachments

c: David E. Janssen, Chief Administrative Officer
Rick Auerbach, Assessor
Jon W. Fullinwider, Chief Information Officer
Joan Ouderkirk, Director, Internal Services Department
Mark J. Saladino, Treasurer and Tax Collector
Violet Varona-Lukens, Executive Officer
Public Information Office
Audit Committee

Attachment A

County of Los Angeles Service and Information Numbers
Categorized List of Toll-Free and Non Toll-Free Numbers Reviewed

Number	Department	Service/System	Category
(888) 550-9243	Affirmative Action	Live Person w/voice mail after hours	Public
(800) 233-9279	Agriculture/Weights & Measures	Answering machine	Public
(800) 564-6600	Alcohol and Drug	PacBell Routing equipment	Public
(800) 544-6861	Auditor-Controller	Meridian w/Answering Machine	Public
(800) 526-0911	Board of Supervisors	Modem/Fax	Modem
(800) 540-4000	**Children and Family Services**	**NEC ACD**	**Public**
(800) 555-6060	Children and Family Services		Unknown
(800) 782-7235	Children and Family Services		Public
(800) 878-1287	Children and Family Services		Unknown
(800) 990-1818	Children and Family Services	Answering machine	Public
(888) 811-1121	Children and Family Services	Meridian w/Answering Machine	Public
(800) 201-2203	Community Development	Voice mail	Public
(800) 236-6000	Community Development	Message: Call cannot be answered	Unknown
(800) 438-8808	**Community Development**	**Menu**	**Public**
(877) 717-2273	Community Development	Live Person	Public
(877) 881-7233	Community Development	Voice mail	Public
(800) 204-6444	Community Senior Services	Live Person	Public
(888) 994-7575	Community Senior Services	Live Person	Public
(800) 973-3370	**Consumer Affairs**	**IVR**	**Public**
(800) 555-3815	Dept. of Small Business	Answering machine	Public
(800) 970-5478	**DHR**	**IVR**	**Public**
(800) 383-4600	**DHS**	**Startel**	**Public**
(800) 400-9399	DHS	Startel	Public
(800) 427-8700	DHS	Live Person w/voice mail after hours	Public
(800) 440-4349	DHS	Answering machine	Public
(800) 490-0014	DHS	Live Person w/voice mail after hours	Public
(800) 794-8252	DHS	Centrex voice mail	Public
(800) 850-6680	DHS	Dictation/Transcription	Internal
(888) 397-3993	**DHS**	**Auto Attendant**	**Public**
(888) 700-9995	DHS	Centrex w/Live Person	Public
(800) 615-8858	**District Attorney**	**NEC PBX ACD**	**Public**
(800) 773-7574	District Attorney	Meridian Key System	Public
(800) 978-3600	**District Attorney**	**Meridian Cinphony ACD**	**Public**
(800) 255-0905	DPSS	Live Person	Public
(800) 578-6762	DPSS	Meridian EKTS/Centrex line	Public
(800) 611-6411	DPSS	PacBell Call Center Manager	Public
(800) 707-6607	DPSS	Centrex/Live Person: GTE Voice Mai	Public
(800) 758-0880	**DPSS**	**Centrex Auto Attendent**	**Public**
(800) 810-8985	DPSS	Meridian EKTS/Centrex line	Public
(800) 815-5005	DPSS	NEC PBX ACD	Public
(877) 597-4777	DPSS	Meridian Cinphony ACD	Public
(888) 368-8288	DPSS	Meridian Cinphony ACD	Public
(888) 393-5327	DPSS	NEC PBX ACD	Public
(888) 678-4477	DPSS	NEC PBX ACD	Public
(888) 944-4477	DPSS	Meridian Cinphony ACD	Public

Number	Department	Service/System	Category
(800) 303-0003	DPW	Live Person	Public
(800) 675-4357	DPW	Live Person	Public
(888) 253-2652	**DPW**	**Menu**	**Public**
(800) 281-8408	Fire Department	Service not avail. For this phone	Unknown
(800) 421-4557	Fire Department	Modem/Fax	Fax
(800) 427-4708	Fire Department	Live Person	Public
(800) 761-6160	Fire Department	Message: out of calling area	Internal
(800) 794-1160	Fire Department	Modem/Fax	Fax
(800) 871-2493	Fire Department	Message: out of calling area	Internal
(800) 881-2408	Fire Department	Message: out of calling area	Internal
(800) 881-2431	Fire Department	Message: out of calling area	Internal
(800) 881-2481	Fire Department	Uknown	Internal
(800) 881-2485	Fire Department	Message: out of calling area	Internal
(800) 881-6183	Fire Department	Message: out of calling area	Internal
(800) 637-8860	Harbor UCLA	Centrex line w/voice mail	Public
(800) 686-7249	Harbor UCLA	Centrex line w/PB voice mail	Public
(800) 820-2303	Headstart	Voice mail	Public
(800) 599-4697	ISD		Unknown
(800) 894-3748	ISD	Menu	Public
(800) 341-9211	**LAC/USC**	**Startel**	**Public**
(800) 416-6688	LAC/USC	Centrex on Norstar & Live Person	Public
(800) 573-7483	LAC/USC	Centrex line w/live Person	Public
(800) 670-7864	**LAC/USC**	**Centrex/Telnet IVR**	**Public**
(877) 633-3728	LAC/USC	PacBell voice mail	Public
(888) 522-5447	**LAC/USC**	**Startel**	**Public**
(800) 786-6464	LACERA	Live Person	Public
(800) 700-9996	Mental Health	Centrex w/Live Person	Public
(800) 464-1176	Municipal Court		Unknown
(800) 778-5879	**Municipal Court**	**Intervoice IVR**	**Public**
(877) 587-9225	**Municipal Court/Jury Services**	**Menu**	**Public**
(800) 600-1114	Museum	Voice mail	Public
(800) 823-1230	Office of Education	Voice mail	Public
(800) 475-5550	Office of Management Care	Navigator/Customer owned	Public
(800) 832-6334	Office of Management Care	Navigator	Public
(800) 989-5255	Office of Management Care		Public
(800) 801-0030	Ombudsman	Live Person	Public
(888) 445-1234	Ombudsman	Meridian/Live Person	Public
(800) 260-3400	Parks & Recreation	Voice mail	Public
(800) 267-2757	Parks & Recreation	Live Person	Public
(800) 404-5888	Parks & Recreation	Live Person w/voice mail after hours	Public
(800) 442-7577	Parks & Recreation		Unknown
(800) 636-3535	Parks & Recreation	Live Person	Public
(800) 834-0024	Probation		Internal
(800) 965-0434	Probation	TDD	Public
(866) 226-8880	Probation	NEC PBX	Public
(800) 801-5551	Public Defender	TDD	TDD
(800) 698-7008	Public Health		Unknown
(800) 700-9530	Public Library	Voice mail	Public
(800) 582-1093	Public Library/FYI	Live Person	Public
(213) 974-6411	**Regional Planning**	**Menu**	**Public**
(877) 728-0235	Registrar-Recorder	1A2 Equipment	Internal
(562) 462-2137	**Registrar-Recorder (Birth, Death & Marriage)**		**Public**

Number	Department	Service/System	Category
(562) 462-2177	**Registrar-Recorder (Business Filings)**		**Public**
(800) 201-8999	**Registrar-Recorder (Recorder)**	**Menu**	**Public**
(800) 815-2666	**Registrar-Recorder (Registrar)**	**Menu**	**Public**
(800) 451-1228	Sheriff's Department	Live Person/Answering Machine	Public
(800) 618-6707	Sheriff's Department		Public
(800) 974-4522	Sheriff's Department	Live Person	Internal
(866) 272-4435	Sheriff's Department		Public
(888) 400-5273	Sheriff's Department	IVR	Public
(888) 807-2111	**TTC**	**Calif. Call Manager/PacBell**	**Public**
(323) 777-4959	**Central Fraud Reporting Line**		**Public**
(800) 260-8787	Unknown	DID/Ring no answer	Uknown
(800) 335-0223	Unknown	DID/Ring no answer	Uknown
(800) 417-6687	Unknown	Dictation/Transcription	Internal
(800) 443-4622	Unknown	Modem/Fax	Modem
(800) 545-8814	Unknown	All circuits are busy	Uknown
(877) 266-3966	Unknown	Answering machine	Public
(888) 700-2900	Unknown	No Answer	Uknown

Menu driven numbers are represented by bold type.

Calls we made by Category

Public	85
Internal	12
Other	17
Total	114

Menu Driven 22

Attachment B

Call Processing System Terms

The following are definitions of terms used to describe the call processing system equipment:

- Interactive Voice Response (IVR) System: An automated system that allows menu selection and will queue callers. Its main distinction is that information that is input by the caller is processed through a database and the caller receives an appropriate response from the system. An example would be a bank system that prompts a caller to input an account number, processes the information, and then provides the caller's bank balance. Several IVRs utilized within the County include: Jury Services, Registrar-Recorder on the Registrar side, and Child Support Services. An IVR is the most sophisticated call processing system.

- Automated Call Distributor (ACD) System: An ACD system is designed to stack or "queue" a large volume of incoming calls. The system generally routes calls to available staff on a "first-come, first-served" basis. In addition, the system can provide automated attendant functionality such as call answering and menu selection. In terms of sophistication, this system falls between the IVR and Auto Attendant. A few ACDs utilized within the County include: Registrar-Recorder, Department of Public Social Services, and Children and Family Services.

- Automated Attendant (AA) System: Of the three systems discussed, this is the least sophisticated. Generally, an AA consists of a Personal Computer (PC) based automated system that provides call answering, menu selection, call routing and pre-recorded information or announcements to incoming callers. It will not stack (queue) calls.